

Appl. No. 10/690,168

Amdt. dated October 31, 2005

Reply to Office Action of June 15, 2005

Attorney Docket K-1939

AMENDMENT TO THE SPECIFICATION

Please replace paragraph 0024 on page 6, beginning on line 1 through line 16, with the following rewritten paragraph:

-- The spray nozzle housing 14, as shown in figures 4a-4c, is generally cylindrical and has a central longitudinal axis. The spray nozzle housing 14 has a flat bottom surface 30 oriented at an angle with respect to the central longitudinal axis of the spray nozzle housing. The central axis of the spray nozzle housing is oriented so that the water spray from the nozzle outlet 34 is projected in the direction of the cutting tool tip. In the embodiment shown in figure 4a the angle the bottom surface of the spray nozzle makes with the central longitudinal axis is about 5° degrees. In the alternative and depending upon the specific application, the bottom surface may be oriented at an angle within a range of between about 4° degrees to about 6° degrees. In other instances the angle may be present in a range between about 2° degrees to about 20° degrees. The spray housing has a main fluid chamber 35 that is in communication with a spray outlet 34. Fluid flows from a main chamber inlet passage 38 into the main chamber 35, the inlet passage 38 is in communication with an elongated fluid recess ~~chamber 36~~ chamber 32. The elongated recess ~~chamber 36~~ chamber 32 is formed in the flat bottom surface 30 of the spray housing. The elongated recess forms an inlet that is in fluid communication with the outlet opening 27 of the support block fluid passage.--

Please replace paragraph 0025 on page 6, beginning on line 17 through page 7, line 10, with the following rewritten paragraph:

-- The spray nozzle housing 14 is welded to the first outer surface 20; the cross-hatching shown in figure 1 represents the weld joint. The spray nozzle housing is assembled to the support block 20 by conventional welding methods as are well known in the art. The spray nozzle housing is oriented on the first outer surface 20 of the support block so as to place the spray nozzle housing in fluid communication with the block fluid passage 26 in the support block. The disclosed embodiment includes an elongated recess chamber 32 having an elongated open end inlet that allows for ease in proper alignment of the spray

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nozzle housing 14 into position so that the outlet opening 27 on the top of the first outer surface 20 of the support block is placed in proper fluid communication with the spray nozzle housing fluid passage. The elongated recess chamber 32 in the bottom surface 30 of the spray nozzle housing allows for greater tolerance in positioning the spray nozzle housing 14 into alignment with the support block outlet 27 as opposed to the precise alignment which would otherwise be necessary if the supply opening into the spray nozzle housing 14 had a cross-sectional area of the outlet opening 27. Although it is not critical for welding purposes that the cross-sectional area of the open end of the recess chamber 32 as best shown in figure 4b is at least twice the cross-sectional area of the outlet opening 27 on the top of the support block, such a relationship makes it easier to adequately position the spray nozzle housing manually prior to welding. Applicant also contemplates that the cross-sectional area of the open end of the recess chamber 32 alternatively is at least three times the cross-sectional area of the block outlet 27 opening. Applicant further contemplates that the cross-sectional area of the outlet opening is at least four times the cross-sectional area of the block outlet opening. The elongated recess ~~chamber 36~~ chamber 32 allows a welder to manually replace spray nozzles in either the field or the workshop.--

Please replace paragraph 0030 on page 8, beginning on line 23 through line 31, with the following rewritten paragraph:

-- To assemble the cutting tool assembly 10, the support block 12 is welded to a rotatable drum (not shown) so that the support block fluid passage is in fluid communication with a fluid supply passage (not shown) within the drum. The weld sufficiently seals the support block 12 to the drum in a liquid tight manner. The protection sleeve 16 is then inserted in the barrel bore 11 of the support body. The cutting tool 18 is then inserted into the tool sleeve 16 and secured to the tool sleeve 16 in any suitable manner such as a retainer ring. Next, the spray nozzle housing 14 is positioned so that the fluid elongated recess ~~chamber 36~~ chamber 32 is in communication with the outlet opening 27 of the support block fluid passage and then welded into position.--

Please replace paragraph 0031 on page 9, beginning on line 1 through line 10, with the following rewritten paragraph:

-- In operation of the cutting tool assembly 10, a supply manifold in the drum communicates water to inlet 25. Inlet 25 communicates with the upstream portion 24 next into sidewall chamber 23 and then the downstream portion 28 of the support block fluid passage. The water exits the support block at the support block outlet opening 27, flows into the recess ~~chamber 36~~ chamber 32 through the spray nozzle housing and exists the spray nozzle outlet 34 and toward the tip of the cutting tool 18. The water from the spray nozzle outlet reduces the potential for ignition of gases such as methane encountered during cutting or mining activities. The water spray additionally suppresses dust during mining and also helps to lubricate the joint between the cutting tool and sleeve for better rotation of the cutting tool.--